JOINT INVENTORS

"EXPRESS MAIL" mailing label No.
EV 340911666 US .
Date of Deposit: **October 28, 2003**
I hereby certify that this paper (or fee) is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 CFR §1.10 on the date indicated above and is addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450

Richard Zimmermann

APPLICATION FOR UNITED STATES LETTERS PATENT

S P E C I F I C A T I O N

TO ALL WHOM IT MAY CONCERN:

Be it known that we, Robert Silva, a citizen of the United States of America, residing at 2516 Rampart Terrace, Reno, Nevada 89509; Chris Lundy, a citizen of the United States of America, residing at 9676 Otter Way, Reno, Nevada 89511; Garrett Olson, a citizen of the United States of America, residing at 2435 Killington Drive, Reno, Nevada 89511 and Jason Kremer a citizen of the United States of America, residing at 426 Octate Circle, Reno, Nevada 89511, have invented a new and useful, APPARATUS AND METHODS FOR CONTINUOUS GAME PLAY DURING A LOCKUP IN A GAMING APPARATUS of which the following is a specification.

APPARATUS AND METHODS FOR CONTINUOUS GAME PLAY DURING A LOCKUP IN A GAMING APPARATUS

Background

This patent is directed to a casino gaming apparatus, which could be either an individual gaming unit or a casino gaming system having a plurality of gaming units, that is capable of allowing a player to continue game play on the gaming apparatus during a lockup of a game on the gaming apparatus.

When playing a game on a conventional gaming apparatus, the entire gaming apparatus was disabled when a jackpot or other large payout determination occurred. If provided with a video display, the gaming apparatus would sometimes display images, such as a pay table, but player interaction would remain disabled. The player had to wait for an attendant to re-enable or reset the gaming apparatus to allow the player to continue playing a game on the gaming apparatus. This often required the player to remain near the gaming apparatus until the arrival of the attendant, thereby limiting the player's ability to wager on an alternate gaming apparatus. The value payout was often dispensed to the player by the attendant by hand, and sometimes required the player to fill out tax forms before receiving the payout. A player therefore had to wait by the gaming apparatus until the attendant arrived, fill out papers and receive the payout before the gaming apparatus was reset. Sometimes it took a relatively long time (e.g., 5-30 minutes) just for the attendant to arrive. Only when the gaming apparatus was reset could the player resume playing on the gaming apparatus.

While the gaming apparatus would often be disabled when a jackpot was won, other circumstances would also disable the gaming apparatus. Value payouts over a predetermined amount, not necessarily a jackpot, would cause the gaming apparatus to be disabled. This was sometimes due to casino requirements that an attendant deliver the payout by hand and/or governmental regulations requiring the preparation of tax forms. Cumulative winnings would also disable the gaming apparatus for similar reasons. The gaming apparatus was also disabled in response to the gaming apparatus being out of tokens, coins, paper currency, ticket vouchers, or other tangible payment methods, in which case an attendant must reload the gaming apparatus and reset the machine.

Summary of the Invention

In one aspect, the invention is directed to a gaming apparatus that may include a display unit, a value input device and a controller operatively coupled to the display unit and the value input device. The controller may include a processor and a memory operatively coupled to the processor. The controller may be programmed to cause the display unit to generate a first game display relating to a first game type, to receive wager data representing a first wager on the first game type, to determine a first value payout associated with an outcome of the first game type, to prevent a second wager on the first game type if the controller determined the first value payout associated with the first game type to be at least a predetermined amount, to cause the display unit to generate a second game display relating to a second game type different from the first game type if the controller determined the first value payout to be at least the predetermined amount, to determine a second value payout associated with an outcome of the second game type, to receive reset data representing a reset signal, and to receive the second wager on the first game type if the controller received the reset data and determined the second value payout. A gaming system may include a plurality of the gaming apparatuses interconnected to form a network of gaming apparatuses. The controller may be programmed to cause the display unit to generate the first game display relating to a first wide area progressive game, and to prevent the second wager on the first wide area progressive game if the controller determined the first value payout associated with the first wide area progressive game to be a progressive value payout. The controller may also be programmed to cause the display unit to generate the second game display relating to a second wide area progressive game if the controller determined the first value payout to be a progressive value payout.

In another aspect, the invention is directed to a gaming apparatus that may include a display unit, a value input device and a controller operatively coupled to the display unit and the value input device. The controller may include a processor and a memory operatively coupled to the processor. The controller may be programmed to cause the display unit to generate a first game display relating to one of the following first game types: poker, blackjack, slots, keno or bingo. The controller may also be programmed to receive wager data representing a first wager on the first game type, to determine a first value payout associated with an outcome of the first game type, to prevent a second wager on the first game type if the controller determined a nonzero

value payout associated with an outcome of the first game type, to cause the display unit to generate a second game display relating to a second game type if the controller determined a nonzero value payout associated with an outcome of the first game type, to determine a second value payout associated with an outcome of the second game type, to receive reset data representing a reset signal, and to receive wager data representing the second wager on the first game type if the controller received the reset data.

The display unit may include a video display unit that is capable of generating video images. The controller may be programmed to cause a video image that may include an image of at least five playing cards to be displayed if the first game type is video poker, to cause a video image that may include an image of a plurality of simulated slot machine reels to be displayed if the first game type is video slots, to cause a video image that may include an image of a plurality of playing cards to be displayed if the first game type is video blackjack, to cause a video image that may include an image of a plurality of keno numbers to be displayed if the first game type is video keno, and to cause a video image that may include an image of a bingo grid to be displayed if the first game type is video bingo. The display unit may include at least one mechanical slot machine reel.

The controller may also be programmed to cause the display unit to generate the second game display, with the second game display relating to a game type other than poker if the first game type is poker, relating to a game type other than blackjack if the first game type is blackjack, relating to a game type other than slots if the first game type is slots, relating to a game type other than keno if the first game type is keno, and relating to a game type other than bingo if the first game type is bingo. The controller may be programmed to cause the display unit to generate the second game display relating to a bonus game of one of the following games: poker, blackjack, slots, keno or bingo. The controller may further be programmed to cause one deal of at least five playing cards if the second game display relates to a bonus game of poker, to cause one deal of a plurality of playing cards if the second game display relates to a bonus game of blackjack, to cause one spin of a plurality of slot machine reels if the second game display relates to a bonus game of slots, to cause one selection of a plurality of gaming numbers if the second game display relates to a bonus game of keno, and to cause one selection of winning bingo numbers if the second game display relates to a bonus game of bingo.

The controller may be programmed to cause the display unit to generate the second game display relating to a different version of the first game type. The controller may also be programmed to cause the display unit to generate the second game display relating to the same version of the first game type, to require the first wager to be at least a first amount, and to require the second wager to be at least a second amount different than the first amount. The controller may be programmed to prevent the second wager on the first game type if the controller determined the nonzero value payout to be a value payout of at least a predetermined value payout. The controller may be programmed to prevent the second wager on the first game type if the controller determined the nonzero value payout to be a jackpot. The controller may be programmed to prevent the second wager on the first game type if the controller determined the nonzero value payout to be a progressive value payout. The controller may be programmed to prevent the second wager on the first game type if the controller determined the nonzero value payout to be cumulative value payouts from previous wagers. The controller may be programmed to cause the value payout to be paid electronically, and to receive the reset data if the controller causes the value payout to be paid electronically. The controller may be programmed to receive the second wager on the first game type if the controller determined the second value payout. The controller may be programmed to cause the display unit to generate a menu display having two or more options and to receive selection data indicating a selection from among the two or more options. The menu display may include an image of the two or more options, with at least one of the two or more options including an option for the second game type.

A gaming system may include a plurality of the gaming apparatuses interconnected to form a network of gaming apparatuses. The controller may be programmed to prevent the second wager on the first game type if the controller determined the nonzero value payout to be a plurality of wagers made at the plurality of gaming apparatuses. Each of the gaming apparatuses may include the controller, and each controller may be programmed to contribute at least part of the first wager on the first game type to the first value payout. Also, each of the gaming apparatuses may include the controller, where each controller may be programmed to receive wager data representing a wager on the second game type, and to contribute at least part of the wager on the second game type to the second value payout. The gaming apparatuses may be interconnected via the Internet.

In yet another aspect, the invention is directed to a gaming method that may include causing a first game display of one of the following first game types to be generated: poker, blackjack, slots, keno or bingo. The gaming method may also include receiving wager data representing a first wager on the first game type, determining a first value payout associated with an outcome of the first game type, preventing a second wager on the first game type if the controller determined a first value payout of at least a predetermined amount, causing a second game display of a second game type to be generated if the controller determined a first value payout of at least the predetermined amount, determining a second value payout associated with an outcome of the second game type, receiving reset data representing a reset signal, and receiving wager data representing the second wager on the first game type if the controller received the reset data.

The invention is also directed to a memory having a computer program stored therein. The computer program being capable of being used in connection with a gaming apparatus. The memory may include a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to generate a game display representing one of the following first game types: poker, blackjack, slots, keno or bingo. The memory may also include a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to receive wager data representing a first wager on the first game type, a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to determine a first value payout associated with an outcome of the first game type, a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to prevent a second wager on the first game type if the first value payout is determined to be of at least a predetermined amount, a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to generate a second game display relating to a second game type if the first value payout is determined to be of at least a predetermined amount, a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to determine a second value payout associated with an outcome of the second game type, a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to receive reset

data representing a reset signal, and a memory portion physically configured in accordance with computer program instructions that would cause the gaming apparatus to receive the wager data representing the second wager on the first game type if the reset data is received.

Additional aspects of the invention are defined by the claims of this patent.

Brief Description of the Drawings

Fig. 1 is a block diagram of an embodiment of a gaming system in accordance with the invention;

Fig. 2 is a perspective view of an embodiment of one of the gaming units shown schematically in Fig. 1;

Fig. 2A illustrates an embodiment of a control panel for a gaming unit;

Fig. 3 is a block diagram of the electronic components of the gaming unit of Fig. 2;

Fig. 4 is a flowchart of an embodiment of a main routine that may be performed during operation of one or more of the gaming units;

Fig. 5 is a flowchart of an alternative embodiment of a main routine that may be performed during operation of one or more of the gaming units;

Fig. 6 is an illustration of an embodiment of a visual display that may be displayed during performance of the video poker routine of Fig. 8;

Fig. 7 is an illustration of an embodiment of a visual display that may be displayed during performance of the video blackjack routine of Fig. 9;

Fig. 8 is a flowchart of an embodiment of a video poker routine that may be performed by one or more of the gaming units;

Fig. 9 is a flowchart of an embodiment of a video blackjack routine that may be performed by one or more of the gaming units;

Fig. 10 is an illustration of an embodiment of a visual display that may be displayed during performance of the slots routine of Fig. 12;

Fig. 11 is an illustration of an embodiment of a visual display that may be displayed during performance of the video keno routine of Fig. 13;

Fig. 12 is a flowchart of an embodiment of a slots routine that may be performed by one or more of the gaming units;

Fig. 13 is a flowchart of an embodiment of a video keno routine that may be performed by one or more of the gaming units;

Fig. 14 is an illustration of an embodiment of a visual display that may be displayed during performance of the video bingo routine of Fig. 15;

Fig. 15 is a flowchart of an embodiment of a video bingo routine that may be performed by one or more of the gaming units;

Fig. 16 is a flowchart of an embodiment of a lockup routine that may be performed by one or more of the gaming units;

Fig. 17 is a flowchart of an alternative embodiment of a lockup routine that may be performed by one or more of the gaming units; and

Fig. 18 is an illustration of an embodiment of a visual display that may be displayed during performance of the lockup routine of Fig. 17.

Detailed Description of Various Embodiments

Although the following text sets forth a detailed description of numerous different embodiments of the invention, it should be understood that the legal scope of the invention is defined by the words of the claims set forth at the end of this patent. The detailed description is to be construed as exemplary only and does not describe every possible embodiment of the invention since describing every possible embodiment would be impractical, if not impossible. Numerous alternative embodiments could be implemented, using either current technology or technology developed after the filing date of this patent, which would still fall within the scope of the claims defining the invention.

It should also be understood that, unless a term is expressly defined in this patent using the sentence "As used herein, the term '_____' is hereby defined to mean..." or a similar sentence, there is no intent to limit the meaning of that term, either expressly or by implication, beyond its plain or ordinary meaning, and such term should not be interpreted to be limited in scope based on any statement made in any section of this patent (other than the language of the claims). To the extent that any term recited in the claims at the end of this patent is referred to in this patent in a manner consistent with a single meaning, that is done for sake of clarity only so as to not confuse the reader, and it is not intended that such claim term be limited, by implication or otherwise, to that single meaning. Finally, unless a claim element is defined by reciting the word "means" and a function without the recital of any structure, it is not intended that the scope of any claim element be interpreted based on the application of 35 U.S.C. §112, sixth paragraph.

Fig. 1 illustrates one possible embodiment of a casino gaming system 10 in accordance with the invention. Referring to Fig. 1, the casino gaming system 10 may include a first group or network 12 of casino gaming units 20 operatively coupled to a network computer 22 via a network data link or bus 24. The casino gaming system 10 may include a second group or network 26 of casino gaming units 30 operatively coupled to a network computer 32 via a network data link or bus 34. The first and second gaming networks 12, 26 may be operatively coupled to each other via a network 40, which may comprise, for example, the Internet, a wide area network (WAN), or a local area network (LAN) via a first network link 42 and a second network link 44. Some or all of the network(s) 12, 26, 40 may be Wide Area Progressive (WAP) networks utilized to provide a WAP game, and some or all of the gaming units 20, 30 may be designed to function as WAP gaming units capable of providing the WAP game. In some cases, a gaming unit 20 may function both as a WAP gaming unit, or a gaming unit 20 for another type of network game, and as a stand-alone gaming unit. Other network games may include non-progressive network games where multiple players wager on a single game and may compete against one another via the network. A stand-alone gaming unit may provide a game that does not use network communication and is executed independently of other gaming units 20.

The first network 12 of gaming units 20 may be provided in a first casino, and the second network 26 of gaming units 30 may be provided in a second casino located in a separate geographic location than the first casino. For example, the two casinos may be located in different areas of the same city, or they may be located in different states. The network 40 may include a plurality of network computers or server computers (not shown), each of which may be operatively interconnected. Where the network 40 comprises the Internet, data communication may take place over the communication links 42, 44 via an Internet communication protocol.

The network computer 22 may be a server computer and may be used to accumulate and analyze data relating to the operation of the gaming units 20. For example, the network computer 22 may continuously receive data from each of the gaming units 20 indicative of the dollar amount and number of wagers being made on each of the gaming units 20, data indicative of how much each of the gaming units 20 is paying out in winnings, data regarding the identity and gaming habits of players playing each of the gaming units 20, etc. The network computer 32 may be a server computer and may be used to perform the same or different functions in relation to the

gaming units 30 as the network computer 22 described above.

Although each network 12, 26 is shown to include one network computer 22, 32 and four gaming units 20, 30, it should be understood that different numbers of computers and gaming units may be utilized. For example, the network 12 may include a plurality of network computers 22 and tens or hundreds of gaming units 20, all of which may be interconnected via the data link 24. The data link 24 may be provided as a dedicated hardwired link or a wireless link. Although the data link 24 is shown as a single data link 24, the data link 24 may comprise multiple data links.

Fig. 2 is a perspective view of one possible embodiment of one or more of the gaming units 20. Although the following description addresses the design of the gaming units 20, it should be understood that the gaming units 30 may have the same design as the gaming units 20 described below. It should be understood that the design of one or more of the gaming units 20 may be different than the design of other gaming units 20, and that the design of one or more of the gaming units 30 may be different than the design of other gaming units 30. Each gaming unit 20 may be any type of casino gaming unit and may have various different structures and methods of operation. For exemplary purposes, various designs of the gaming units 20 are described below, but it should be understood that numerous other designs may be utilized.

Referring to Fig. 2, the casino gaming unit 20 may include a housing or cabinet 50 and one or more input devices, which may include a coin slot or acceptor 52, a paper currency acceptor 54, a ticket reader/printer 56 and a card reader 58, which may be used to input value to the gaming unit 20. A value input device may include any device that can accept value from a customer. As used herein, the term "value" may encompass gaming tokens, coins, paper currency, ticket vouchers, credit or debit cards, smart cards, and any other object representative of value.

If provided on the gaming unit 20, the ticket reader/printer 56 may be used to read and/or print or otherwise encode ticket vouchers 60. The ticket vouchers 60 may be composed of paper or another printable or encodable material and may have one or more of the following informational items printed or encoded thereon: the casino name, the type of ticket voucher, a validation number, a bar code with control and/or security data, the date and time of issuance of the ticket voucher, redemption instructions and restrictions, a description of an award, and any other information that may be necessary or desirable. Different types of ticket vouchers 60 could be used,

such as bonus ticket vouchers, cash-redemption ticket vouchers, casino chip ticket vouchers, extra game play ticket vouchers, merchandise ticket vouchers, restaurant ticket vouchers, show ticket vouchers, etc. The ticket vouchers 60 could be printed with an optically readable material such as ink, or data on the ticket vouchers 60 could be magnetically encoded. The ticket reader/printer 56 may be provided with the ability to both read and print ticket vouchers 60, or it may be provided with the ability to only read or only print or encode ticket vouchers 60. In the latter case, for example, some of the gaming units 20 may have ticket printers 56 that may be used to print ticket vouchers 60, which could then be used by a player in other gaming units 20 that have ticket readers 56.

If provided, the card reader 58 may include any type of card reading device, such as a magnetic card reader or an optical card reader, and may be used to read data from a card offered by a player, such as a credit card or a player tracking card. If provided for player tracking purposes, the card reader 58 may be used to read data from, and/or write data to, player tracking cards that are capable of storing data representing the identity of a player, the identity of a casino, the player's gaming habits, etc.

The gaming unit 20 may include one or more audio speakers 62, a coin payout tray 64, an input control panel 66, and a display unit 70. Where the gaming unit 20 is designed to facilitate play of a video casino game, such as video poker or video slots, the display unit 70 may be a color video display unit that displays images relating to the particular game or games. Where the gaming unit 20 is designed to facilitate play of a reel-type slot machine, the display unit 70 may comprise a plurality of mechanical reels that are rotatable, with each of the reels having a plurality of reel images disposed thereon. The audio speakers 62 may generate audio representing sounds such as the noise of spinning slot machine reels, a dealer's voice, music, announcements or any other audio related to a casino game. The input control panel 66 may be provided with a plurality of pushbuttons or touch-sensitive areas that may be pressed by a player to select games, make wagers, make gaming decisions, etc.

Fig. 2A illustrates one possible embodiment of the control panel 66, which may be used where the gaming unit 20 is a slot machine having a plurality of mechanical or "virtual" reels. Referring to Fig. 2A, if the display unit 70 is provided in the form of a video display unit, the control panel 66 may include a "See Pays" button 72 that, when activated, causes the display unit 70 to generate one or more

display screens showing the odds or payout information for the game or games provided by the gaming unit 20. As used herein, the term "button" is intended to encompass any device that allows a player to make an input, such as an input device that must be depressed to make an input selection or a display area that a player may simply touch. The control panel 66 may include a "Cash Out" button 74 that may be activated when a player decides to terminate play on the gaming unit 20, in which case the gaming unit 20 may return value to the player, such as by returning a number of coins to the player via the payout tray 64.

If the gaming unit 20 provides a slots game having a plurality of reels and a plurality of paylines which define winning combinations of reel symbols, the control panel 66 may be provided with a plurality of selection buttons 76, each of which allows the player to select a different number of paylines prior to spinning the reels. For example, five buttons 76 may be provided, each of which may allow a player to select one, three, five, seven or nine paylines.

If the gaming unit 20 provides a slots game having a plurality of reels, the control panel 66 may be provided with a plurality of selection buttons 78 each of which allows a player to specify a wager amount for each payline selected. For example, if the smallest wager accepted by the gaming unit 20 is a quarter ($0.25), the gaming unit 20 may be provided with five selection buttons 78, each of which may allow a player to select one, two, three, four or five quarters to wager for each payline selected. In that case, if a player were to activate the "5" button 76 (meaning that five paylines were to be played on the next spin of the reels) and then activate the "3" button 78 (meaning that three coins per payline were to be wagered), the total wager would be $3.75 (assuming the minimum bet was $0.25).

The control panel 66 may include a "Max Bet" button 80 to allow a player to make the maximum wager allowable for a game. In the above example, where up to nine paylines were provided and up to five quarters could be wagered for each payline selected, the maximum wager would be 45 quarters, or $11.25. The control panel 66 may include a spin button 82 to allow the player to initiate spinning of the reels of a slots game after a wager has been made.

In Fig. 2A, a rectangle is shown around the buttons 72, 74, 76, 78, 80, 82. It should be understood that that rectangle simply designates, for ease of reference, an area in which the buttons 72, 74, 76, 78, 80, 82 may be located. Consequently, the term "control panel" should not be construed to imply that a panel or plate separate

from the housing 50 of the gaming unit 20 is required, and the term "control panel" may encompass a plurality or grouping of player activatable buttons.

Although one possible control panel 66 is described above, it should be understood that different buttons could be utilized in the control panel 66, and that the particular buttons used may depend on the game or games that could be played on the gaming unit 20. If the display unit 70 is provided as a video display unit, the control panel 66 could be generated by the display unit 70. In that case, each of the buttons of the control panel 66 could be a colored area generated by the display unit 70, and some type of mechanism may be associated with the display unit 70 to detect when each of the buttons was touched, such as a touch-sensitive screen.

Gaming Unit Electronics

Fig. 3 is a block diagram of a number of components that may be incorporated in the gaming unit 20. Referring to Fig. 3, the gaming unit 20 may include a controller 100 that may comprise a program memory 102, a microcontroller or microprocessor (MP) 104, a random-access memory (RAM) 106 and an input/output (I/O) circuit 108, all of which may be interconnected via an address/data bus 110. It should be appreciated that although only one microprocessor 104 is shown, the controller 100 may include multiple microprocessors 104. Similarly, the memory of the controller 100 may include multiple RAMs 106 and multiple program memories 102. Although the I/O circuit 108 is shown as a single block, it should be appreciated that the I/O circuit 108 may include a number of different types of I/O circuits. The RAM(s) 104 and program memories 102 may be implemented as semiconductor memories, magnetically readable memories, and/or optically readable memories, for example.

Although the program memory 102 is shown in Fig. 3 as a read-only memory (ROM) 102, the program memory of the controller 100 may be a read/write or alterable memory, such as a hard disk. In the event a hard disk is used as a program memory, the address/data bus 110 shown schematically in Fig. 3 may comprise multiple address/data buses, which may be of different types, and there may be an I/O circuit disposed between the address/data buses.

Fig. 3 illustrates that the control panel 66, the coin acceptor 52, the bill acceptor 54, the card reader 58 and the ticket reader/printer 56 may be operatively coupled to the I/O circuit 108, each of those components being so coupled by either a

unidirectional or bidirectional, single-line or multiple-line data link, which may depend on the design of the component that is used. The speaker(s) 62 may be operatively coupled to a sound circuit 112, that may comprise a voice- and sound-synthesis circuit or that may comprise a driver circuit. The sound-generating circuit 112 may be coupled to the I/O circuit 108.

As shown in Fig. 3, the components 52, 54, 56, 58, 66, 112 may be connected to the I/O circuit 108 via a respective direct line or conductor. Different connection schemes could be used. For example, one or more of the components shown in Fig. 3 may be connected to the I/O circuit 108 via a common bus or other data link that is shared by a number of components. Furthermore, some of the components may be directly connected to the microprocessor 104 without passing through the I/O circuit 108.

Overall Operation of Gaming Unit

One manner in which one or more of the gaming units 20 (and one or more of the gaming units 30) may operate is described below in connection with a number of flowcharts which represent a number of portions or routines of one or more computer programs, which may be stored in one or more of the memories of the controller 100. The computer program(s) or portions thereof may be stored remotely, outside of the gaming unit 20, and may control the operation of the gaming unit 20 from a remote location. Such remote control may be facilitated with the use of a wireless connection, or by an Internet interface that connects the gaming unit 20 with a remote computer (such as one of the network computers 22, 32) having a memory in which the computer program portions are stored. The computer program portions may be written in any high level language such as C, C++, C#, Java or the like or any low-level assembly or machine language. By storing the computer program portions therein, various portions of the memories 102, 106 are physically and/or structurally configured in accordance with computer program instructions.

Fig. 4 is a flowchart of a main operating routine 200 that may be stored in the memory of the controller 100. Referring to Fig. 4, the main routine 200 may begin operation at block 202 during which an attraction sequence may be performed in an attempt to induce a potential player in a casino to play the gaming unit 20. The attraction sequence may be performed by displaying one or more video images on the display unit 70 (if provided as a video display unit) and/or causing one or more sound

segments, such as voice or music, to be generated via the speakers 62. The attraction sequence may include a scrolling list of games that may be played on the gaming unit 20 and/or video images of various games being played, such as video poker, video blackjack, video slots, video keno, video bingo, etc.

During performance of the attraction sequence, if a potential player makes any input to the gaming unit 20 as determined at block 204, the attraction sequence may be terminated and a game-selection display may be generated on the display unit 70 (if provided as a video display unit) at block 206 to allow the player to select a game available on the gaming unit 20. The gaming unit 20 may detect an input at block 204 in various ways. For example, the gaming unit 20 could detect if the player presses any button on the gaming unit 20; the gaming unit 20 could determine if the player deposited one or more coins into the gaming unit 20; the gaming unit 20 could determine if the player deposited paper currency into the gaming unit; etc.

The game-selection display generated at block 206 may include, for example, a list of video games that may be played on the gaming unit 20 and/or a visual message to prompt the player to deposit value into the gaming unit 20. While the game-selection display is generated, the gaming unit 20 may wait for the player to make a game selection. Upon selection of one of the games by the player as determined at block 208, the controller 100 may cause one of a number of game routines to be performed to allow the selected game to be played. For example, the game routines could include a video poker routine 210, a video blackjack routine 220, a slots routine 230, a video keno routine 240, and a video bingo routine 250. At block 208, if no game selection is made within a given period of time, the operation may branch back to block 202.

After one of the routines 210, 220, 230, 240, 250 has been performed to allow the player to play one of the games, block 260 may be utilized to determine whether the player wishes to terminate play on the gaming unit 20 or to select another game. If the player wishes to stop playing the gaming unit 20, which wish may be expressed, for example, by selecting a "Cash Out" button, the controller 100 may dispense value to the player at block 262 based on the outcome of the game(s) played by the player. The operation may then return to block 202. If the player did not wish to quit as determined at block 260, the routine may return to block 208 where the game-selection display may again be generated to allow the player to select another game.

It should be noted that although five gaming routines are shown in Fig. 4, a

different number of routines could be included to allow play of a different number of games. The gaming unit 20 may also be programmed to allow play of different games.

Fig. 5 is a flowchart of an alternative main operating routine 300 that may be stored in the memory of the controller 100. The main routine 300 may be utilized for gaming units 20 that are designed to allow play of only a single game or single type of game. Referring to Fig. 5, the main routine 300 may begin operation at block 302 during which an attraction sequence may be performed in an attempt to induce a potential player in a casino to play the gaming unit 20. The attraction sequence may be performed by displaying one or more video images on the display unit 70 (if provided as a video display unit) and/or causing one or more sound segments, such as voice or music, to be generated via the speakers 62.

During performance of the attraction sequence, if a potential player makes any input to the gaming unit 20 as determined at block 304, the attraction sequence may be terminated and a game display may be generated on the display unit 70 (if provided as a video display unit) at block 306. The game display generated at block 306 may include, for example, an image of the casino game that may be played on the gaming unit 20 and/or a visual message to prompt the player to deposit value into the gaming unit 20. At block 308, the gaming unit 20 may determine if the player requested information concerning the game, in which case the requested information may be displayed at block 310. Block 312 may be used to determine if the player requested initiation of a game, in which case a game routine 320 may be performed. The game routine 320 could be any one of the game routines disclosed herein, such as one of the five game routines 210, 220, 230, 240, 250, or another game routine.

After the routine 320 has been performed to allow the player to play the game, block 322 may be utilized to determine whether the player wishes to terminate play on the gaming unit 20. If the player wishes to stop playing the gaming unit 20, which wish may be expressed, for example, by selecting a "Cash Out" button, the controller 100 may dispense value to the player at block 324 based on the outcome of the game(s) played by the player. The operation may then return to block 302. If the player did not wish to quit as determined at block 322, the operation may return to block 308.

Video Poker

Where the gaming unit 20 is designed to facilitate play of a video poker game, the display unit 70 may comprise a video display unit. Fig. 6 is an exemplary display 350 that may be shown on the display unit 70 during performance of the video poker routine 210 shown schematically in Fig. 4. Referring to Fig. 6, the display 350 may include video images 352 of a plurality of playing cards representing the player's hand, such as five cards. To allow the player to control the play of the video poker game, a plurality of player-selectable buttons may be displayed. The buttons may include a "Hold" button 354 disposed directly below each of the playing card images 352, a "Cash Out" button 356, a "See Pays" button 358, a "Bet One Credit" button 360, a "Bet Max Credits" button 362, and a "Deal/Draw" button 364. The display 350 may also include an area 366 in which the number of remaining credits or value is displayed. If the display unit 70 is provided with a touch-sensitive screen, the buttons 354, 356, 358, 360, 362, 364 may form part of the video display 350. Alternatively, one or more of those buttons may be provided as part of a control panel that is provided separately from the display unit 70.

Fig. 8 is a flowchart of the video poker routine 210 shown schematically in Fig. 4. Referring to Fig. 8, at block 370, the routine may determine whether the player has requested payout information, such as by activating the "See Pays" button 358, in which case at block 372 the routine may cause one or more pay tables to be displayed on the display unit 70. At block 374, the routine may determine whether the player has made a bet, such as by pressing the "Bet One Credit" button 360, in which case at block 376 bet data corresponding to the bet made by the player may be stored in the memory of the controller 100. At block 378, the routine may determine whether the player has pressed the "Bet Max Credits" button 362, in which case at block 380 bet data corresponding to the maximum allowable bet may be stored in the memory of the controller 100.

At block 382, the routine may determine if the player desires a new hand to be dealt, which may be determined by detecting if the "Deal/Draw" button 364 was activated after a wager was made. In that case, at block 384 a video poker hand may be "dealt" by causing the display unit 70 to generate the playing card images 352. After the hand is dealt, at block 386 the routine may determine if any of the "Hold" buttons 354 have been activated by the player, in which case data regarding which of the playing card images 352 are to be "held" may be stored in the controller 100 at

block 388. If the "Deal/Draw" button 364 is activated again as determined at block 390, each of the playing card images 352 that was not "held" may be caused to disappear from the video display 350 and to be replaced by a new, randomly selected, playing card image 352 at block 392.

At block 394, the routine may determine whether the poker hand represented by the playing card images 352 currently displayed is a winner. That determination may be made by comparing data representing the currently displayed poker hand with data representing all possible winning hands, which may be stored in the memory of the controller 100. If there is a winning hand, a payout value corresponding to the winning hand may be determined at block 396.

At block 397, the routine may check to see if the payout determined at block 396 was of a predetermined amount. For example, the predetermined amount may be a jackpot, which may be an amount set by the casino and/or based on the rules and parameters of the poker game. The predetermined amount may also be a value set by government regulations, which may be an amount that requires the player to fill out tax papers as a condition of receiving the payout. In still other cases, the predetermined amount may not be a set amount, but may be a progressive value payout that continues to grow as more wagers are made on the game being played. A stand-alone gaming unit that operates independently of other gaming units 20 may have a progressive value payout that accumulates only from wagers made on that gaming unit. Alternatively, progressive value payouts may be found with Wide Area Progressive (WAP) gaming units, which accumulate the progressive value payout from wagers made on multiple WAP gaming units for the same game routine (i.e., a WAP game routine), though the progressive value payout may also be the result of wagers from multiple game routines. The poker routine 210 may be a WAP game played among multiple gaming units 20 that each offer the poker routine 210 and are operatively coupled to each other and/or through the network computer 22. With progressive value payouts, the predetermined amount may be based on a predetermined event (e.g., a player winning a progressive jackpot) where the predetermined amount may be the current value of the progressive jackpot or a predetermined portion thereof.

If the value payout determined at block 396 is of a predetermined amount or more (e.g., a jackpot), the routine may pass control to a lockup routine 398. The lockup routine 398 may enter a continuous loop or wait state that prevents the player

from placing any further wagers on the poker game until the gaming unit 20 is reset. If the value payout is less than a predetermined amount, or if the gaming unit 20 is reset following the lockup routine 398, control may pass to block 399. At block 399, the player's cumulative value or number of credits may be updated by subtracting the bet made by the player and adding, if the hand was a winner, the payout value determined at block 396. The cumulative value or number of credits may also be displayed in the display area 366 (Fig. 6).

While the predetermined amount has been discussed above with respect to a single value payout, the predetermined amount may also be based on a player's cumulative winnings from multiple value payouts from the gaming unit 20, or the player's cumulative winnings from value payouts from multiple gaming units 20. The predetermined amount may also be based on a player's cumulative winnings from a single sitting at a gaming unit 20, or from multiple sittings where a player may receive a value payout from the gaming unit 20, then leave only to return to the gaming unit 20 at a later time and receive another value payout. Using the player tracking card and the card reader 58, the gaming unit may be able to read the amount of the player's cumulative winnings from the player tracking card or read the player's identity from the player tracking card and receive data regarding the player's cumulative winnings from the network computer 22. The player's overall winnings from the current gaming unit 20 or from multiple gaming units 20 and/or sittings, may be updated and determined at block 399. The determination of a predetermined amount and the lockup routine 398 may then be initiated after block 399 to determine whether the player's cumulative value is equal to or greater than a predetermined amount and whether the lockup routine 398 is to be initiated.

Although the video poker routine 210 is described above in connection with a single poker hand of five cards, the routine 210 may be modified to allow other versions of poker to be played. For example, seven card poker may be played, or stud poker may be played. Alternatively, multiple poker hands may be simultaneously played. In that case, the game may begin by dealing a single poker hand, and the player may be allowed to hold certain cards. After deciding which cards to hold, the held cards may be duplicated in a plurality of different poker hands, with the remaining cards for each of those poker hands being randomly determined.

Video Blackjack

Where the gaming unit 20 is designed to facilitate play of a video blackjack game, the display unit 70 may comprise a video display unit. Fig. 7 is an exemplary display 400 that may be shown on the display unit 70 during performance of the video blackjack routine 220 shown schematically in Fig. 4. Referring to Fig. 7, the display 400 may include video images 402 of a pair of playing cards representing a dealer's hand, with one of the cards shown face up and the other card being shown face down, and video images 404 of a pair of playing cards representing a player's hand, with both the cards shown face up. The "dealer" may be the gaming unit 20.

To allow the player to control the play of the video blackjack game, a plurality of player-selectable buttons may be displayed. The buttons may include a "Cash Out" button 406, a "See Pays" button 408, a "Stay" button 410, a "Hit" button 412, a "Bet One Credit" button 414, and a "Bet Max Credits" button 416. The display 400 may also include an area 418 in which the number of remaining credits or value is displayed. If the display unit 70 is provided with a touch-sensitive screen, the buttons 406, 408, 410, 412, 414, 416 may form part of the video display 400. Alternatively, one or more of those buttons may be provided as part of a control panel that is provided separately from the display unit 70.

Fig. 9 is a flowchart of the video blackjack routine 220 shown schematically in Fig. 4. Referring to Fig. 9, the video blackjack routine 220 may begin at block 420 where it may determine whether a bet has been made by the player. That may be determined, for example, by detecting the activation of either the "Bet One Credit" button 414 or the "Bet Max Credits" button 416. At block 422, bet data corresponding to the bet made at block 420 may be stored in the memory of the controller 100. At block 424, a dealer's hand and a player's hand may be "dealt" by making the playing card images 402, 404 appear on the display unit 70.

At block 426, the player may be allowed to be "hit," in which case at block 428 another card will be dealt to the player's hand by making another playing card image 404 appear in the display 400. If the player is hit, block 430 may determine if the player has "bust," or exceeded 21. If the player has not bust, blocks 426 and 428 may be performed again to allow the player to be hit again.

If the player decides not to hit, at block 432 the routine may determine whether the dealer should be hit. Whether the dealer hits may be determined in accordance with predetermined rules, such as the dealer always hit if the dealer's hand

totals 15 or less. If the dealer hits, at block 434 the dealer's hand may be dealt another card by making another playing card image 402 appear in the display 400. At block 436 the routine may determine whether the dealer has bust. If the dealer has not bust, blocks 432, 434 may be performed again to allow the dealer to be hit again.

If the dealer does not hit, at block 436 the outcome of the blackjack game and a corresponding payout may be determined based on, for example, whether the player or the dealer has the higher hand that does not exceed 21. If the player has a winning hand, a payout value corresponding to the winning hand may be determined at block 440.

At block 442, the routine may check to see if the payout value determined at block 440 was of a predetermined amount or more. The predetermined amount may be a jackpot, an amount set by the casino and/or rules and parameters of the blackjack routine 220, an amount set by state or federal regulations, a progressive value payout, a player's cumulative winnings, etc. The progressive value payout may be related to a WAP game, wherein the blackjack routine 220 may be a WAP game played among multiple gaming units 20 that each offer the blackjack routine 220 and are operatively coupled to each other and/or through a network computer 22. The predetermined amount may therefore be based on a predetermined event (e.g., a player winning a progressive jackpot), where the predetermined amount may be the current value of the jackpot.

If the value payout determined at block 440 is of a predetermined amount, or more (e.g., a jackpot), the routine may pass control to a lockup routine 444. The lockup routine 444 may enter a continuous loop or wait state that prevents the player from placing any further wagers on the blackjack game until the gaming unit 20 is reset. If the value payout is less than a predetermined amount or if the gaming unit 20 is reset following the lockup routine 444, control may pass to block 446. If the predetermined value is based on a player's cumulative winnings, the determination of a predetermined amount and the lockup routine 444 may also be initiated after block 446. At block 446, the player's cumulative value or number of credits may be updated by subtracting the bet made by the player and adding, if the player won, the payout value determined at block 440. The cumulative value or number of credits may also be displayed in the display area 418 (Fig. 7).

Slots

Where the gaming unit 20 is designed to facilitate play of a video slots game, the display unit 70 may comprise a video display unit. Fig. 10 is an exemplary display 450 that may be shown on the display unit 70 during performance of the slots routine 230 shown schematically in Fig. 4. Referring to Fig. 10, the display 450 may include video images 452 of a plurality of slot machine reels, each of the reels having a plurality of reel symbols 454 associated therewith. Although the display 450 shows five reel images 452, each of which may have three reel symbols 454 that are visible at a time, other reel configurations could be utilized.

To allow the player to control the play of the slots game, a plurality of player-selectable buttons may be displayed. The buttons may include a "Cash Out" button 456, a "See Pays" button 458, a plurality of payline-selection buttons 460 each of which allows the player to select a different number of paylines prior to "spinning" the reels, a plurality of bet-selection buttons 462 each of which allows a player to specify a wager amount for each payline selected, a "Spin" button 464, and a "Max Bet" button 466 to allow a player to make the maximum wager allowable.

Fig. 12 is a flowchart of the slots routine 230 shown schematically in Fig. 10. Referring to Fig. 12, at block 470, the routine may determine whether the player has requested payout information, such as by activating the "See Pays" button 458, in which case at block 472 the routine may cause one or more pay tables to be displayed on the display unit 70. At block 474, the routine may determine whether the player has pressed one of the payline-selection buttons 460, in which case at block 476 data corresponding to the number of paylines selected by the player may be stored in the memory of the controller 100. At block 478, the routine may determine whether the player has pressed one of the bet-selection buttons 462, in which case at block 480 data corresponding to the amount bet per payline may be stored in the memory of the controller 100. At block 482, the routine may determine whether the player has pressed the "Max Bet" button 466, in which case at block 484 bet data (which may include both payline data and bet-per-payline data) corresponding to the maximum allowable bet may be stored in the memory of the controller 100.

If the "Spin" button 464 has been activated by the player as determined at block 486, at block 488 the routine may cause the slot machine reel images 452 to begin "spinning" so as to simulate the appearance of a plurality of spinning mechanical slot machine reels. At block 490, the routine may determine the positions

at which the slot machine reel images will stop, or the particular symbol images 454 that will be displayed when the reel images 452 stop spinning. At block 492, the routine may stop the reel images 452 from spinning by displaying stationary reel images 452 and images of three symbols 454 for each stopped reel image 452. The virtual reels may be stopped from left to right, from the perspective of the player, or in any other manner or sequence.

The routine may provide for the possibility of a bonus game or round if certain conditions are met, such as the display in the stopped reel images 452 of a particular symbol 454. If there is such a bonus condition as determined at block 494, the routine may proceed to block 496 where a bonus round may be played. The bonus round may be a different game than slots, and many other types of bonus games could be provided. If the player wins the bonus round, or receives additional credits or points in the bonus round, a bonus value may be determined at block 498. A payout value corresponding to outcome of the slots game and/or the bonus round may be determined at block 500.

At block 502, the routine may check to see if the payout value determined at block 500 was of a predetermined amount or more. The predetermined amount may be a jackpot, an amount set by the casino and/or rules and parameters of the slots routine 230, an amount set by state or federal regulations, a progressive value payout, a player's cumulative winnings, etc. The progressive value payout may be related to a WAP game, wherein the slots routine 230 may be a WAP game played among multiple gaming units 20 that each offer the slots routine 230 and are operatively coupled to each other and/or through a network computer 22. The predetermined amount may therefore be based on a predetermined event (e.g., a player winning a progressive jackpot), where the predetermined amount may be the current value of the jackpot.

If the value payout determined at block 500 is of a predetermined amount or more (e.g., a jackpot), the routine may pass control to a lockup routine 504. The lockup routine 504 may enter a continuous loop or wait state that prevents the player from placing any further wagers on the slots game until the gaming unit 20 is reset. If the value payout is less than a predetermined amount, or if the gaming unit 20 is reset following the lockup routine 504, control may pass to block 506. If the predetermined value is based on a player's cumulative winnings, the determination of a predetermined amount and the lockup routine 504 may also be initiated after block

506. At block 506, the player's cumulative value or number of credits may be updated by subtracting the bet made by the player and adding, if the slot game and/or bonus round was a winner, the payout value determined at block 500.

Although the above routine has been described as a virtual slot machine routine in which slot machine reels are represented as images on the display unit 70, actual slot machine reels that are capable of being spun may be utilized instead, in which case the display unit 70 could be provided in the form of a plurality of mechanical reels that are rotatable, each of the reels having a plurality of reel images disposed thereon.

Video Keno

Where the gaming unit 20 is designed to facilitate play of a video keno game, the display unit 70 may comprise a video display unit. Fig. 11 is an exemplary display 520 that may be shown on the display unit 70 during performance of the video keno routine 240 shown schematically in Fig. 4. Referring to Fig. 11, the display 520 may include a video image 522 of a plurality of numbers that were selected by the player prior to the start of a keno game and a video image 524 of a plurality of numbers randomly selected during the keno game. The randomly selected numbers may be displayed in a grid pattern.

To allow the player to control the play of the keno game, a plurality of player-selectable buttons may be displayed. The buttons may include a "Cash Out" button 526, a "See Pays" button 528, a "Bet One Credit" button 530, a "Bet Max Credits" button 532, a "Select Ticket" button 534, a "Select Number" button 536, and a "Play" button 538. The display 520 may also include an area 540 in which the number of remaining credits or value is displayed. If the display unit 70 is provided with a touch-sensitive screen, the buttons may form part of the video display 520. Alternatively, one or more of those buttons may be provided as part of a control panel that is provided separately from the display unit 70.

Fig. 13 is a flowchart of the video keno routine 240 shown schematically in Fig. 4. The keno routine 240 may be utilized in connection with a single gaming unit 20 where a single player is playing a keno game, or the keno routine 240 may be utilized in connection with multiple gaming units 20 where multiple players are playing a single keno game. In the latter case, one or more of the acts described below may be performed either by the controller 100 in each gaming unit or by one of

the network computer 22, 32 to which multiple gaming units 20 are operatively connected.

Referring to Fig. 13, at block 550, the routine may determine whether the player has requested payout information, such as by activating the "See Pays" button 528, in which case at block 552 the routine may cause one or more pay tables to be displayed on the display unit 70. At block 554, the routine may determine whether the player has made a bet, such as by having pressed the "Bet One Credit" button 530 or the "Bet Max Credits" button 532, in which case at block 556 bet data corresponding to the bet made by the player may be stored in the memory of the controller 100. After the player has made a wager, at block 558 the player may select a keno ticket, and at block 560 the ticket may be displayed on the display 520. At block 562, the player may select one or more game numbers, which may be within a range set by the casino. After being selected, the player's game numbers may be stored in the memory of the controller 100 at block 564 and may be included in the image 522 on the display 520 at block 566. After a certain amount of time, the keno game may be closed to additional players (where a number of players are playing a single keno game using multiple gambling units 20).

If play of the keno game is to begin as determined at block 568, at block 570 a game number within a range set by the casino may be randomly selected either by the controller 100 or a central computer operatively connected to the controller, such as one of the network computers 22, 32. At block 572, the randomly selected game number may be displayed on the display unit 70 and the display units 70 of other gaming units 20 (if any) which are involved in the same keno game. At block 574, the controller 100 (or the central computer noted above) may increment a count which keeps track of how many game numbers have been selected at block 570.

At block 576, the controller 100 (or one of the network computers 22, 32) may determine whether a maximum number of game numbers within the range have been randomly selected. If not, another game number may be randomly selected at block 570. If the maximum number of game numbers has been selected, at block 578 the controller 100 (or a central computer) may determine whether there are a sufficient number of matches between the game numbers selected by the player and the game numbers selected at block 570 to cause the player to win. The number of matches may depend on how many numbers the player selected and the particular keno rules being used. If there are a sufficient number of matches, a payout may be determined

at block 580 to compensate the player for winning the game. The payout may depend on the number of matches between the game numbers selected by the player and the game numbers randomly selected at block 570.

At block 582, the routine may check to see if the payout value determined at block 580 was of a predetermined amount or more. The predetermined amount may be a jackpot, an amount set by the casino and/or rules and parameters of the keno routine 240, an amount set by state or federal regulations, a progressive value payout, a player's cumulative winnings, etc. The progressive value payout may be related to a WAP game, wherein the keno routine 240 may be a WAP game played among multiple gaming units 20 that each offer the keno routine 240 and are operatively coupled to each other and/or through a network computer 22. The predetermined amount may therefore be based on a predetermined event (e.g., a player winning a progressive jackpot), where the predetermined amount may be the current value of the jackpot.

If the value payout determined at block 580 is of a predetermined amount or more (e.g., a jackpot), the routine may pass control to a lockup routine 584. The lockup routine 584 may enter a continuous loop or wait state that prevents the player from placing any further wagers on the keno game until the gaming unit 20 is reset. If the value payout is less than a predetermined amount, or if the gaming unit 20 is reset following the lockup routine 584, control may pass to block 586. If the predetermined value is based on a player's cumulative winnings, the determination of a predetermined amount and the lockup routine 584 may also be initiated after block 586. At block 586, the player's cumulative value or number of credits may be updated by subtracting the bet made by the player and adding, if the keno game was won, the payout value determined at block 580. The cumulative value or number of credits may also be displayed in the display area 540 (Fig. 11).

Video Bingo

Where the gaming unit 20 is designed to facilitate play of a video bingo game, the display unit 70 may comprise a video display unit. Fig. 14 is an exemplary display 600 that may be shown on the display unit 70 during performance of the video bingo routine 250 shown schematically in Fig. 4. Referring to Fig. 14, the display 600 may include one or more video images 602 of a bingo card and images of the bingo numbers selected during the game. The bingo card images 602 may have a grid

pattern.

To allow the player to control the play of the bingo game, a plurality of player-selectable buttons may be displayed. The buttons may include a "Cash Out" button 604, a "See Pays" button 606, a "Bet One Credit" button 608, a "Bet Max Credits" button 610, a "Select Card" button 612, and a "Play" button 614. The display 600 may also include an area 616 in which the number of remaining credits or value is displayed. If the display unit 70 is provided with a touch-sensitive screen, the buttons may form part of the video display 600. Alternatively, one or more of those buttons may be provided as part of a control panel that is provided separately from the display unit 70.

Fig. 15 is a flowchart of the video bingo routine 250 shown schematically in Fig. 4. The bingo routine 250 may be utilized in connection with a single gaming unit 20 where a single player is playing a bingo game, or the bingo routine 250 may be utilized in connection with multiple gaming units 20 where multiple players are playing a single bingo game. In the latter case, one or more of the acts described below may be performed either by the controller 100 in each gaming unit 20 or by one of the network computers 22, 32 to which multiple gaming units 20 are operatively connected.

Referring to Fig. 15, at block 620, the routine may determine whether the player has requested payout information, such as by activating the "See Pays" button 606, in which case at block 622 the routine may cause one or more pay tables to be displayed on the display unit 70. At block 624, the routine may determine whether the player has made a bet, such as by having pressed the "Bet One Credit" button 608 or the "Bet Max Credits" button 610, in which case at block 626 bet data corresponding to the bet made by the player may be stored in the memory of the controller 100.

After the player has made a wager, at block 628 the player may select a bingo card, which may be generated randomly. The player may select more than one bingo card, and there may be a maximum number of bingo cards that a player may select. After play is to commence as determined at block 632, at block 634 a bingo number may be randomly generated by the controller 100 or a central computer such as one of the network computers 22, 32. At block 636, the bingo number may be displayed on the display unit 70 and the display units 70 of any other gaming units 20 involved in the bingo game.

At block 638, the controller 100 (or a central computer) may determine whether any player has won the bingo game. If no player has won, another bingo number may be randomly selected at block 634. If any player has bingo as determined at block 638, the routine may determine at block 640 whether the player playing that gaming unit 20 was the winner. If so, at block 642 a payout for the player may be determined. The payout may depend on the number of random numbers that were drawn before there was a winner, the total number of winners (if there was more than one player), and the amount of money that was wagered on the game.

At block 644, the routine may check to see if the payout value determined at block 642 was of a predetermined amount or more. The predetermined amount may be a jackpot, an amount set by the casino and/or rules and parameters of the bingo routine 250, an amount set by state or federal regulations, a progressive value payout, a player's cumulative winnings, etc. The progressive value payout may be related to a WAP game, wherein the bingo routine 250 may be a WAP game played among multiple gaming units 20 that each offer the bingo routine 250 and are operatively coupled to each other and/or through a network computer 22. The predetermined amount may therefore be based on a predetermined event (e.g., a player winning a progressive jackpot), where the predetermined amount may be the current value of the jackpot.

If the value payout determined at block 642 is of a predetermined amount or more (e.g., a jackpot), the routine may pass control to a lockup routine 646. The lockup routine 646 may enter a continuous loop or wait state that prevents the player from placing any further wagers on the bingo game until the gaming unit 20 is reset. If the value payout is less than a predetermined amount, or if the gaming unit 20 is reset following the lockup routine 646, control may pass to block 648. If the predetermined value is based on a player's cumulative winnings, the determination of a predetermined amount and the lockup routine 646 may also be initiated after block 648. At block 648, the player's cumulative value or number of credits may be updated by subtracting the bet made by the player and adding, if the bingo game was won, the payout value determined at block 642. The cumulative value or number of credits may also be displayed in the display area 616 (Fig. 14).

Continuous Game Play

Fig. 16 is a flowchart of an embodiment of a lockup routine 700 which may be stored in the memory of the controller 100, and which may be used as the lockup routine 398, 444, 504, 584, 646 shown schematically in Figs. 8, 9, 12, 13, 15 respectively. As mentioned above, the lockup routine 700 may be initiated following a determination that a value payout (either a single or cumulative payout) is equal to or greater than a predetermined amount. The lockup routine 700 may be utilized for gaming units 20 that are designed to allow play of only a single game or a single type of game. A type of game, or game type, may relate to a general kind of game. For example, slots may be a game type as distinguished from poker, blackjack, keno and bingo. A gaming unit 20 may be designed to allow play of only slots games or a particular slots game. However, game types may also be distinguished based on game version, game rules, wager requirements, network games versus non-network games, WAP games versus non-WAP games, etc. For example, a slots game having a single payline may be one game type whereas a slots game having multiple paylines may be another game type; a slots game having a particular minimum wager requirement may be one game type whereas a slots game having another minimum wager requirement may be another game type; etc. Poker, blackjack, keno and bingo may likewise be game types that, in turn, each include various game types based on game version, game rules, wager requirements, etc.

Referring to Fig. 16, the lockup routine 700 may begin operation at block 702 during which the gaming unit 20 may enter a wait state and the player is prevented from placing another wager on the game type for which the predetermined amount was met. This may include a data communication received by the controller 100 that prevents the controller 100 (or network computer 22) from executing the game, or initiates a mechanical lock that prevents movement of mechanical parts necessary to play the game. The wait state may cause only the routine for the original game type (i.e., the game type for which a predetermined value was achieved) to enter into a wait state leaving the gaming unit 20 free to execute other games of other types. For example, if the player was playing the slots routine 230 and won a jackpot, the lockup routine 700 may enter the wait state at block 702 and the player would be prevented from placing another wager on that slots game, though the lockup routine 700 may allow the player to continue with another version of the slots game, a slots game with different rules, a slots game with different wager requirements, etc. In some cases,

the player may be permitted to continue with the same type of game, though without being allowed to place a wager or receive a payout. If the game is a WAP game or a network game, the gaming unit 20 may be operatively disconnected from the network 12 so as to no longer be able to execute the WAP or network game. However, the gaming unit 20 may remain operatively coupled to the remaining gaming units 20 to play a different WAP game type or other network game type, and/or operatively coupled to another network 26 of gaming units 30 to play a WAP game or other network game. The remaining gaming units 20 may continue to play the original WAP game type and contribute to a new progressive jackpot.

Once the routine has entered the wait state at block 702, a menu display may be generated on the display unit 70 at block 704 to allow the player to select from multiple options. Among the options made available to the player may be options to play a new game, place a new wager, view pay tables, exit the menu, etc. Although the lockup routine 700 may be designed for a single game or a single type of game, the new game types may include games of a similar type as the original game type, though with different versions, wager requirements, rules, etc. For example, if the player won a jackpot playing a particular slots game (e.g., slots with nine paylines), the new game options may include other slots games (e.g., slots with a single payline) and the player may be locked out of playing the slots game with nine paylines. The new game options may also include a bonus game, which may be an extra iteration of the game routine for the original game type without requiring a new wager. In the case of slots, the bonus game may be an extra spin of the reels. The options may also include new wager options that permit the player to continue playing the same game though with different wager requirements. For example, if the player won a jackpot playing slots with a $1.00 minimum bet per payline, the player may be locked out of playing slots with a $1.00 minimum bet per payline, but may be allowed the option of playing slots with a $0.25 minimum bet per payline. If the slots game is a WAP game, the new game options may include a slots game that may be executed independently of other gaming units 20 (e.g., no contribution to a common progressive value payout) and independently of the network computer 22.

While the menu display is generated, the gaming unit 20 may wait for the player to make a selection. If the player does not make a selection as determined at block 706, the lockup routine 700 may perform a check to see whether the gaming unit 20 has been reset to allow the player to continue playing the game for which the

predetermined amount was reached. If the gaming unit 20 has not been reset as determined at block 708, the lockup routine 700 may continue to wait for the player to make a selection from the menu display. If the gaming unit 20 has been reset, the lockup routine 700 may terminate and pass control to the original game and allow the player to continue playing the original game type. The gaming unit 20 may be reset by an attendant using a physical key, magnetic card, optical card, etc. that may release a mechanical barrier to playing the original game type or that may cause a reset signal to be received by the controller 100. An attendant may also enter an electronic code that may be received by the controller 100. The gaming unit 20 may be reset manually using the display unit 70, the control panel 66, the card reader 58 or by opening the housing 50 to access the electronics or a key box. The gaming unit 20 may also be reset remotely via the network 12 or a wireless communication device. An event may precede resetting the gaming unit 20, which may include an attendant providing the value payout to the player, an attendant taking information from the player, the player filling out tax forms relating to the amount won, electronically depositing the value payout into the player's account, etc. When the event has been fulfilled, an attendant may then reset the gaming unit 20 or otherwise cause the gaming unit 20 to be reset. The gaming unit 20 may also be reset automatically, for example, once the value payout is deposited electronically to the player's account, the controller 100 may receive a signal to reset the gaming unit 20 which may originate from the network computer 22 or another computer that monitors the transfer of funds.

Returning to Fig. 16, if the player selects one of the options as determined at block 706, the lockup routine 700 may execute the player's selection. For example, if the player selects a new game option or a new wager option, a game display of the new game type may be generated on the display unit 70 at block 710. The game display generated at block 710 may include, for example, an image of the casino game that may be played on the gaming unit 20 and/or a visual message to prompt the player to deposit value into the gaming unit 20. The game display may be dependent on the player's selection as determined at block 706. For example, selecting a new wager may result in a game display similar to the game display of the original game type, though a visual message may prompt the player to deposit a different wager amount. Selecting a new game option may result in a game display that is a variation

of the game display for the original game type (e.g., a new slots game may feature different reel configurations, different payline selections, etc.).

Although Fig. 16 depicts a game display being generated at block 710, the display that is generated may be other than a game display. For example, depending on the player's selection, a display of a pay table relating to the original game type, a similar game type with a different wager or a new game type may be displayed on the display unit 70. A display of the player's remaining credits or information concerning any of the available options or information concerning the original game type may also be generated on the display unit 70. The player may further chose to watch a movie clip, animation clip or other form of entertainment to pass time until the gaming unit 20 is reset, any of which may be generated on the display unit 70 and/or through the speakers 62. If the player chooses to exit the menu display, a display may be generated which may allow the option of returning to the menu display. Exiting the menu display may be accompanied by the generation of the attraction sequence mentioned above and/or a message requesting the player to wait until an attendant arrives or until the gaming unit 20 is reset.

While a player is playing a new game type other than the original game type at block 710, the lockup routine 700 may continue to check to see if the gaming unit 20 has been reset. Alternatively, the lockup routine 700 may determine whether the gaming unit 20 has been reset after each iteration of the game routine at block 710. If the gaming unit 20 has not been reset, as determined at block 712, the lockup routine 700 may continue with or execute another iteration of the new game type at block 710. If the gaming unit 20 has been reset as determined at block 712, the lockup routine 700 may determine whether the player has finished the new game type at block 710. The determination of whether the player has finished the new game type at block 714 may be dependent on various factors. For example, if the new game type is slots, a slots routine 230 may be executed by the controller 100 at block 710. If the player has made a wager but not a payline selection, the lockup routine 700 may determine at block 714 that the slots routine 230 is unfinished. The lockup routine 700 may therefore continue the new game type at block 716 until the new game type is finished, as determined at block 714. The continuation of the game routine at block 716 may include a display of a message generated on the display unit 70 indicating that the gaming unit 20 has been reset.

In the case of slots, the new game type may be considered finished after one iteration of the slots routine 230 which may include one spin of the reels. In the case of poker, the new game type at block 710 may be considered finished after one iteration of the poker routine 210 which may include one deal of a hand of playing cards. In the case of blackjack, the new game type at block 710 may be considered finished after one iteration of the blackjack routine 220, which may include one deal of the playing cards. In the case of keno, the new game type at block 710 may be considered finished after one iteration of the keno routine 240, which may include a random selection of keno numbers by the controller 100 or a central computer operatively connected to the controller 100. In the case of any new game type played at block 710, the new game type may be considered finished after a determination of whether the player won the new game type or not. The game routine at block 710 may also include determining a value payout and updating the player's cumulative value or number of credits.

Alternatively, the determination at block 714 may be independent of the number of iterations of the game routine and instead be based on the number of credits remaining on the wager, the number of credits remaining in the player's cumulative total, whether the player has decided to quit the new game type, etc. When the game routine is finished as determined at block 714, the lockup routine 700 may terminate and pass control to the game type that was originally being played.

Those of ordinary skill in the art will recognize that the specifics of the lockup routine 700 may be dependent on the available options generated with the menu display at block 704 and the selection made at block 706. For example, if the player selects to watch an animation clip, an animation clip may be generated at block 710 instead of a game, and the lockup routine 700 may determine whether or not the animation clip has ended at block 714 rather than determining if the new game type has ended. A selection to view pay tables may result in generating a display of a pay table at block 710 and determining at block 714 if the player is finished viewing the pay table, which may be indicated by a player input. A selection to view credits may result in a display of the player's credits at block 710 and a determination at block 714 of whether the player is finished viewing the credits, which may also be determined from a player input. If the animation clip, display of a pay table, display of credits, etc. is not finished, the animation clip, display of a pay table, display of credits, etc. may continue at block 716 until finished. Alternatively, the lockup routine 700 may

generate an interruption or message to display to the player regardless of whether the new game type, animation clip, display, etc. has been completed. The message may request the player to quit the routine at block 710 or that the routine will be terminated shortly. The lockup routine 700 may then terminate and pass control to the original game routine.

Fig. 17 is a flowchart of an alternative lockup routine 750 that may be stored in the memory of the controller 100, and which may be utilized as the lockup routine 398, 444, 504, 584, 646 shown schematically in Figs. 8, 9, 12, 13, 15 respectively. The lockup routine 750 may be utilized for gaming units 20 that are designed to allow play of multiple games, including multiple WAP or other network games, multiple non-WAP and non-network games or a combination of all. Referring to Fig. 17, the lockup routine 750 may begin operation at block 752 and the gaming unit 20 may enter a wait state and prevent the player from placing any further wagers on the game for which a predetermined amount was met until the gaming unit 20 is reset. The wait state may cause only the routine for the original game type to enter into a wait state leaving the gaming unit 20 free to execute other routines. If the all or part of the original game routine was executed through a network (e.g., WAP games, competition with players on other gaming units 20, etc.), the gaming unit 20 may be operatively disconnected from the network 12 so as to no longer be able to play the original game. However, the gaming unit 20 may remain operatively coupled to the remaining gaming units 20 to play a different game type (e.g., a different WAP game or other network game), and/or operatively coupled to another network 26 of gaming units 30 to play different WAP game or other network game.

During the wait state at block 752, a menu display may be generated on the display unit 70 at block 754 to allow the player to select from multiple options. The options may include new game options, new wager options, display options, etc. The new game options may include game types other than the original game type, including different versions of the game, different rules, different wager requirements, etc. For example, if the original game type was a slots game, the new game options may include video poker, video blackjack, video keno and video bingo, in addition to different versions of the slots game and bonus games. If the gaming unit 20 is designed to play WAP games or other network games, the new game type options may include WAP games or other network games instead of, or in addition to, game types that may be executed locally by the controller 100. The new wager options may

be for a game type the same as the original game type, except with different wager requirements. The display options may include a display of credits, a display of pay tables, a display of information, a display of a movie or animation clip, a display generated from exiting the menu display, etc.

While the menu display is generated, the gaming unit 20 may wait for the player to make a selection. If the player does not make a selection as determined at block 756, the lockup routine 750 may perform a check to see whether the gaming unit has been reset. If the gaming unit 20 has not been reset as determined at block 758, the lockup routine 750 may continue to wait for the player to make a selection from the menu display. If the gaming unit 20 has been reset, the lockup routine 750 may terminate and pass control to the routine of the original game type.

Upon selection of one of the options by the player as determined at block 756, the lockup routine 750 may execute the player's selection. As indicated above, this may include executing a new game routine other than the original game routine. For example, if the original game type was a $1.00 per bet WAP game of slots with nine paylines, the new game type may be a video poker routine 210, a video blackjack routine 220, a video keno routine 240 or a video bingo routine 250, any of which may be played independently or with another gaming unit 20 via the network 12. The new game type may also be a WAP slots routine 230, though of a version other than the original slots routine with nine paylines, or a nine paylines slots routine 230 executed independently of other gaming units (e.g., a non-WAP game). Bonus games (e.g., an extra spin of the reels in the slots routine) may also be a new game option. A new wager option may include placing a new wager on a game type the same as the original game, though with a different wager requirement (e.g., a $0.25 per bet WAP game of slots with nine paylines). Though not specifically depicted in Fig. 17, a selection of a display option may result in displaying credits, displaying pay tables, displaying information, displaying a movie or animation clip, generating displays from exiting the menu display, etc. A selection to exit the menu display may result in a display that includes the option of returning to the menu display, displaying an attraction sequence, instructions to wait for an attendant, etc.

During or after the execution of the routine for the player's selection (e.g., following an iteration of a game routine for a new game type), the lockup routine 750 may check to see if the gaming unit 20 has been reset. If the gaming unit has not been reset, as determined at block 760, the lockup routine 750 may continue with or

execute another iteration of the routine for the player's selection. Alternatively, if an iteration of the routine has been completed, the lockup routine 750 may return to block 754 to generate the menu display to permit a different selection. If the gaming unit has been reset, the lockup routine 750 may determine at block 762 whether or not the routine for the player's selection has been completed, which may include determining whether an iteration of the routine has been completed. If completed, the routine for the player's selection may be terminated and control may pass to the routine for the original game type. If not completed, the routine for the player's selection may be permitted to continue at block 764 until completed.

Fig. 18 is an exemplary display 800 that may be shown on the display unit 70 in response to the menu display generated at block 754 of Fig. 17, though some aspects of the display 800 may also be applicable to the menu display generated at block 704 of Fig. 16, as will be recognized. The particular images of the display 800 may also vary depending on the particular games available and the options available to the player. Referring to Fig. 18, the display 800 may include a video image 802 of a message indicating to the player that a predetermined amount has been won. The message may include instructions necessary for receiving the value payout. The display 800 may also include several options that the user may select, including WAP game options (if the gaming unit 20 is designed for WAP games), local game options, new wager options and other options that may be exercised by the player while waiting for the value payout.

To allow the player to select an option, a plurality of player-selectable buttons may be displayed. The buttons for the WAP game options may include a "Poker" button 804, a "Blackjack" button 806, a "Slots" button 808, a "Keno" button 810, a "Bingo" button 812, and a "Bonus" button 814. Each of these buttons 802, 804, 806, 808, 810, 812, 814, if selected, may cause a routine to be executed for the various WAP games, although the player may be precluded from one or more of the WAP games as indicated by an image indicating the option is not available. In Fig. 18, the WAP slots game is not available, which may be the case if the predetermined amount was reached while playing a WAP slots game.

The buttons for non-networked game options may include a "Poker" button 816, a "Blackjack" button 818, a "Slots" button 820, a "Keno" button 822, a "Bingo" button 824, and a "Bonus" button 826. Each of these buttons may cause a routine to be executed for the various games that may be executed independently of other

gaming units 20. If applicable, one or more of the buttons 816, 818, 820, 822, 824, 826 may include an image indicating the player is precluded from selecting that option. The buttons for the new wager options may include a "Spin" button 828, a "Bet One" button 830, and a "Bet Max" button 832. The particular buttons for the new wager options may depend on the original game type that was played. In the present example, it is assumed the original game type was a WAP slots game. Those of ordinary skill in the art will recognize the new wager options that may exist for various games, some of which have been discussed above regarding various other displays.

The buttons for the wait options, or display options, may include a "See Pays" button 834, a "Credits" button 836, a "Movie" button 838, an "Information" button 840 and an "Exit" button 842. If the display unit 70 is provided with a touch-sensitive screen, the buttons 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842 may form part of the video display 800. Alternatively, one or more of those buttons may be provided as part of a control panel that is provided separately from the display unit 70.